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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,224	03/22/2004	Long Yu	21854-00019-US1	9134
30678 7590 01/09/2007 CONNOLLY BOVE LODGE & HUTZ LLP P.O. BOX 2207 WILMINGTON, DE 19899-2207			EXAMINER NUTTER, NATHAN M	
			ART UNIT 1711	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/805,224	<b>Applicant(s)</b> YU ET AL.	
	<b>Examiner</b> Nathan M. Nutter	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-25 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-17 and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The following is placed in effect in response to the amendment of 8 December 2006.

The objection to claims 28-53 as being of improper dependent form for failing to further limit the subject matter of a previous claim, is hereby expressly withdrawn in view of the cancellation thereof.

The rejection of claims 20, 26 and 27, only, under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, is hereby expressly withdrawn. Claims 26 and 27 have been cancelled.

The rejection of claims 11-17 and 20-27 under 35 U.S.C. 102(e) as anticipated by Haasmaa et al (US 6,656,984), only, is hereby expressly withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Nothing in the Specification, as originally filed,

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teaches the claimed range for polyol plasticizer in claim 21. Applicants cannot arbitrarily pick numbers from Examples to provide support for a range that hasn't been shown as having the end-points arbitrarily chosen by applicants.

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 11-17 and 20-27 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Peltonen et al (US 6,780,903).

The patents to Peltonen et al (US 6,780,903) and Haasmaa et al (US 6,656,984) both teach the manufacture of a biodegradable resin composition having the constituents recited and within ranges as recited herein. Peltonen et al (US 6,780,903) show hydroxyalkyl starch at the paragraph bridging column 4 to column 5. Note column 4 (lines 24-38) for the stearic acid, column 5 (lines 3-14) for the use of a polyol plasticizer, column 5 (lines 28-37) for the use of polyvinyl alcohol. Note the many Examples. The constituents are disclosed at column 5 (lines 38-43) and the Examples to be within the limits as claimed. The use of a fatty acid soap, that in view of the reference to Hawley's Condensed Chemical Dictionary, as the stearic acid component, is shown at column 5 (lines 19-25), present in an amount that embraces that recited herein. Though the reference teaches fatty acid soap broadly, the inclusion of a stearate salt, the most prevalent according to Hawley's, would be at least obvious. As such, the instant claims are deemed to be at least obvious, if not anticipated, by the teachings of the patent.

Claims 11-17 and 20-27 are rejected under 35 U.S.C. 103(a) as obvious over Haasmaa et al (US 6,656,984).

The reference to Haasmaa et al (US 6,656,984) shows a maleic anhydride starch used with polyvinyl alcohol, water, glycerol esters and stearates. Note column 3 (lines

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58-65) for the modified starch, column 3 (lines 39-57) for the stearates, column 4 (lines 5-16) for the glycerol ester, and oils in general and column 4 (lines 17-27) for the polyvinyl alcohol. Note column 4 (lines 28-48) for the compositional limitations which are deemed to overlap with those recited herein. Again, the stearic acid component is not disclosed as to compositional limitations. Since this component is recited for the same use as disclosed herein, an artisan would know to employ a suitable amount. As such, the instant claims are deemed to be obvious from the teachings of the patent.

Claims 11-17 and 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silbiger et al (US 6,248,838), taken in view of Buehler et al (US 5,316,578) and Frische et al (US 5,374,304).

The reference to Silbiger et al (US 6,248,838) shows the employment of hydroxyalkyl starch at a presence of from 3 to 50 % by weight, polyvinyl alcohol at a presence of from 5 to 40 % by weight, water at about 6 to 20% by weight, glycerol at a level of 0.5 to 40 % by weight, and starch. Note the paragraph bridging column 3 to column 4, column 6 (lines 19-63) for the PVA, HA starch and glycerol plasticizer. Note column 8 (lines 17 et seq.) for the additional un-modified starch. The reference fails to teach the employment of a fatty acid or salt, as claimed.

The reference to Buehler et al (US 5,316,578) shows the employment of hydroxyalkyl starch at an unspecified range, though the product is drawn to a starch melt indicating major quantities, and by calculation of the other constituents as to their respective inclusions, would certainly be within the range recited and claimed herein.

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Water is present at about to 12% by weight, glycerol at a level of 4.8-39.8% by weight, and metal stearate at a level of 0.1 to 2% by weight. Note column 3 (lines 7-45) for the HA starch, water, plasticizer and metal stearates. The reference fails to show the inclusion of a PVA constituent.

The patent to Frische et al (US 5,374,304) shows the employment of hydroxyalkyl starch at a presence of from 60 to 97 % by weight, polyvinyl alcohol at a presence of from 3 to 40 % by weight, water, glycerol at a level of 3 to 40 % by weight. Note column 4 (lines 1-39) and the Examples. The patent fails to show the fatty acid or salt.

The references taken together show the conventionality of the constituents employed and that these constituents are used in essentially overlapping, inclusive parameters as those recited and claimed herein. The several components, thus, have conventional and known uses to those having an ordinary skill in the art as regards the production of biodegradable compositions, as disclosed and recited herein. Further, since these constituents would not be found in any one reference, interpolation of the exact weight percentages for each separate compound need not be shown by any of the several references included in the rejection. The various components are shown by the references to be known in the production of biodegradable composites and would be used in accordance with the desired characteristics of the final composition as well as cost, availability and other factors of manufacturing and handling. Manipulation of the various components as to inclusion parameters would have been obvious modifications to an artisan in view of these considerations. As such, the instant claims are deemed to

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be obvious over the teachings of the references. No unexpected results have been shown on the record relating to any particular component or inclusion of any components.

### ***Response to Arguments***

Applicant's arguments filed 17 May 2006 have been fully considered but they are not persuasive.

With regard to the rejection of claim 21 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, there is provided no support for this claimed range in the Specification, as originally filed.

With regard to the rejection of claims 11-17 and 20-27 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Peltonen et al (US 6,780,903), the reference to Peltonen et al teaches the stearate component, as pointed out above, as a fatty acid soap, in amounts as recited herein. With regard to Peltonen et al, applicants have chosen to ignore the teachings of the inclusion of fatty acid soaps as pointed out in the Final Rejection. The amount of inclusion is shown, as well. When the fatty acid soap is employed at the range as recited, the reference is deemed to anticipate the claim 11 recitations of fatty acid salt.

With regard to the rejection of claims 11-17 and 20-27 under 35 U.S.C. 103(a) as obvious over Haasmaa et al (US 6,656,984), applicants do not refute the rejection.

With regard to the rejection of claims 11-17 and 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silbiger et al (US 6,248,838), taken in view of Buehler et al (US 5,316,578) and Frische et al (US 5,374,304), applicants infer that the



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choice of any particular starch from that disclosed by Silbiger et al would be a burdensome one, yet they themselves use several, and fail to delineate why choice of one starch isn't obvious over another. With regards to their argument that "(n)o one really knows how much of what is actually in component (i) because of the enormous compositional ranges for each type of compound in component (i)," this argument is deemed spurious in an attempt to negate the teachings of the reference as too broad simply because the teachings embrace those recited in applicants' claims. A skilled artisan would know how to choose constituents from the Silbiger et al reference. Applicants imply that science and progress are held in a void. Applicants are reminded that a reference is taken for the entirety of its teachings and not for isolated passages relied upon to assert patentability. It is irrelevant how many compositions Silbiger et al disclose. The composition, as claimed herein, is shown, which is sufficient for the grounds of rejection. Applicants' contention that the disclosure of Silbiger et al "fails to describe any particular biodegradable composition," is erroneous since the constituents of Silbiger et al are, for the most part, biodegradable in and of themselves. Since all of the references are drawn to compositions that are essentially biodegradable. Applicants have not shown why the constituents employed, as shown by the references separately and together, as pointed out above, are not conventional and are not used conventionally. With regard to applicants' "experimental data," it is pointed out that the references shown sufficient guidance to manufacture the instant composition.

MPEP 2106 II. C. Review the claims

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The claims define the property rights provided by a patent, and thus require careful scrutiny. The goal of claim analysis is to identify the boundaries of the protection sought by the applicant and to understand how the claims relate to and define what the applicant has indicated is the invention. Office personnel must first determine the scope of a claim by thoroughly analyzing the language of the claim before determining if the claim complies with each statutory requirement for patentability. See *In re Hiniker Co.*, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998) ("[T]he name of the game is the claim.").

Further, with regard to the rejection under 35 USC 103 over Silbiger taken with Buehler et al and Frische et al, applicants opine voluminously on the reference to Silbiger coming to a conclusion that "(n)o one really knows" what is actually the subject of the constituents of patent. Applicants argue that the reference fails to teach anything particularly substantial, failing to acknowledge what the Examiner has pointed out and for the reasons as expounded in the Final Rejection. The three references in the rejection under 35 USC 103 are drawn to identical compositions using the constituents recited herein for their art-recognized uses. Nothing more needs to be shown since the rejection was made under 35 USC 103 and does not require the standards of 35 USC 102 as applicants attempt to argue. The use of a constituent for its art-recognized function is motivation to include that constituent in similar compositions.

No Declaration has been filed in this application, and none from any other application will be considered unless properly submitted. The Declaration in SN 09/857,611 is not a part of the record in the prosecution of this application. The Examiner is not aware of any rule that would make it so.

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All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

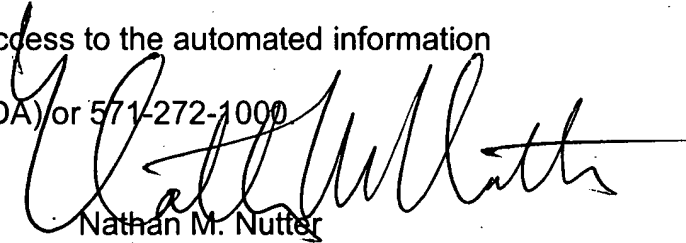
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter  
Primary Examiner  
Art Unit 1711

nmn

3 January 2007